An explanation is scarcely derivable, however, herefrom* Eesolving the gas into its elements, one obtains

Cubic metre. Cubic metre. Cubid metre. 6-31 0+5-44 H-f 20-51 tf 6-86 0+5-58 H+21-75N

Gas from 6 kilogramme's C from conduits had ,,6 ,, C ,, chambers ,,

Gas from chambers from 6 kilogrammes C had) Q.~-04*0 14 H4- 1>94N

If the 0"14 cubic metres H originated from the decomposi* tion of water, there must have*correspondingly been 014 x 0*5 0 therein. Thus 0*55 cubic metre—0*07 cubic metre = 0*48 cubic metre 0 originated from another source. This circumstance, as well as the increase in the N content of the gas admits of one's concluding that air has reached the gas. Then, however, is explained the diminution of the combustible value of the gas derived from 1 kilogramme C, probably absolutely unconstrained. The air has principally burnt CH* and H, probably some CO, and secondarily also there has occurred inter-reaction between some steam and CO, possibly also CH4. Quantitative data as to this are not able to be derived. Also, these gases with their content of 30 to 32 per cent, of C-con-taining gases belong to those in which a considerable portion of the distillation gas has been already burnt in the producer*

TABLE I.

	Composition. Volume per cent.						Gas containing 1 kilogramme C.					
	g > 3 j C J P. 0 o	- p 1 t* & o	45 H < y P H	4a 0 QJ P H W	43 1 . J-l " O J P < w 0	Com bus- tible Valu e 1 cubi c metr e. Calo ries.	1 o 5	g ~ J 3 0 0	a p 8	£ 3 0 w	rl | O s	Com bus tible Valu e.
(In front of cleaner	5 - 6 6	—	25 -4	14 -8	o -i	1,18 3	0- 33	—	1- 52	0- 89	o- oi	7,07 2
1 < Behind cleaner	- 0 7	—	25 -0	15 *9	—	—	—	—	—	—	—	—
' Before gas valve ,	- 2	—	23 -8	16 -5	—	1,16 1	0- 43	—	1- 43	0- 99	—	6,96 6
f In front of cleaner	4 - 8	—	25 *9	14 '8	0 - 6	1,33 2	0- 28	—	1- 54	0- 88	0- 04	7,56 6

2 % Behind cleaner	5-9	—	24-3	16-9	0-1	—	—	—	—	—	—	—
' Before gas valve .	6-4	—	23-8	17'6	—	1,190	0-39	—	1-47	1-09	—	7,358
(In front of cleaner	4-2	—	28-0	13-8	O'S	1,280	0-24	—	1-58	0-78	—	7,226
3 -J Behind cleaner	4-8	—	29-9	14-9	0-2	—	—	—	—	—	—	—
(Before gas valve .	5-6	—	25-4	16'2	_.	1,200	0-34	~	1-52	0-97	~	7,200